
Testimony

Of

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Before the

Subcommittee on Emergency Communications, Preparedness and Response
Committee on Homeland Security
United States House of Representatives

On

# Advancing Public Alert and Warning Systems to Build a More Resilient Nation

May 14, 2008

Chairman Cuellar, Ranking Member Dent, and distinguished members of the sub-committee, I would like to thank you for this opportunity to testify today on the vitally important topic of public alert and warning.

I am Randall C. Duncan, and I have the privilege of serving as Emergency Management Director for the nearly 500,000 people who live and work in Sedgwick County and the City of Wichita, Kansas. My staff and I are responsible for mitigation, preparedness for, response to, and recovery from emergencies and disasters whether natural, technological, or homeland security in origin. I have served in my current community for nearly 10 of my 22 years in this field. During that time, I have administered nearly a dozen presidential declarations of major disaster and emergency for events ranging from tornadoes and floods to severe winter storms. I had the opportunity to provide support to FDNY in the aftermath to the events of September 11, 2001 at the Incident Command Post in Manhattan (from September 18 – 28, 2001). I have also served two Governors of Kansas as their appointee to the Kansas Commission on Emergency Planning and

Response (State Emergency Response Commission). I have served as the chair of that body for the last two years. I also serve as the vice-chair of the International Association of Emergency Managers (IAEM) Government Affairs Committee. Although today, my remarks are addressed to you primarily in my capacity as a local government emergency manager.

I would like to begin the discussion about this important topic with you by describing the alert and warning system currently in place within my jurisdiction, and some of the timing elements that are associated with it. Then, I'd like to discuss a few broader issues relating to the general powers of the various levels of government. I would then like to take a few moments to try and paint for you a portrait of severe weather in Kansas to illustrate the issue of alert and warning from the local perspective. Then, I'd like to conclude with some recommendations and suggestions for consideration of the sub committee.

Sedgwick County is the home to Wichita, Kansas, the largest city within the State (nearly 360,000). It is also home to many aircraft manufacturers – like Boeing Military, Spirit, Hawker Beechcraft, Cessna, Bombardier and others. The county physically covers 1008 square miles – about average area for a county in Kansas. It includes densely populated urban areas, suburban areas, and rural areas.

Wichita and Sedgwick County are subject to a number of hazards. Foremost among them is flooding; followed by severe storms (both winter and summer), tornadoes, and drought, according to the 2006 version of the Sedgwick County Hazard Vulnerability Analysis (http://www.sedgwickcounty.org/emermgmt/2006_hazardous_analysis_plan.pdf). The State of Kansas ranks third in the nation for the frequency of tornadoes on an annual basis. This makes the issue of public alert and warning very important.

**Warning System within Sedgwick County**

Warning within Sedgwick County is accomplished through the use of a system with multiple layers – to insure wide dissemination of information and redundancy in the system. The first layer of the system – and the thing people are probably most familiar with on the high plains – is the outdoor warning system (some call them storm sirens). In Sedgwick County, we have approximately 140 of them covering the entire county (See Exhibit A). In addition to this layer of warning, we also have a very close partnership with the electronic media in the area – both radio and television. The next layer of our system of warning relies on the NOAA all hazard radio system. For those who are served by the cable television provider in the area, there is also a limited "over ride" system allowing a message directing people to tune to a local television station to find out more information about the emergency causing the message to be displayed. What ultimately makes all these layers of warning work, however, are the citizens with training who know what to do and when to do it when they receive the alert and warning. In fact, you can have the most sophisticated warning system possible – but if people fail to take survival-oriented action after receiving the warning, then the system will fail.

In order to ensure that the public does know what the appropriate actions are, my staff and I make appearances in each of the 20 cities within Sedgwick County at the beginning of tornado season and provide training that literally reaches thousands of people. This outreach program is conducted in partnership with the National Weather Service, and has been in existence for more than 15 years. In fact, in the National Weather Service assessment conducted in the aftermath of the May 3, 1999 Haysville / South Wichita tornado, this training program is credited with saving many lives.

Sedgwick County – like most of the other counties in the State of Kansas – also utilizes tools provided by FEMA to assist in alert and warning. For example, the National Warning System (NAWAS) "state" side circuit (telephony) is utilized for discussions between counties and the National Weather Service to communicate information about severe weather and other hazards facing local governments. This allows for the timely dissemination of warning through local means to the people of the impacted jurisdiction. For example, if a tornado were in the county to the west of mine moving into my county, that emergency manager could pick up the NAWAS drop, activate the "push-to-talk" button and let me know what is happening with the storm as it crosses jurisdictional boundaries. This tool has been utilized by emergency management programs I have been associated with for over 15 years now – and has existed for a longer period of time across the nation. At the federal level, this system exists to allow information from the President to be widely disseminated in case of a national emergency. While local governments utilize this system on almost a daily basis, the President has never utilized the system for its originally designed purpose.

**Vulnerabilities of the existing warning system**

The current warning system in Sedgwick County – especially the outdoor warning sirens – has room for improvement. These sirens are activated by a single radio signal that provides activation in an "all or nothing" format. This is, essentially, technology unchanged from World War II. In addition, these outdoor warning devices are connected to commercial electrical distribution, and in the absence of commercial power, they will simply not function. That is why our system of alert and warning consists of multiple, redundant layers. We are looking into improving this system, but the costs pose problems. One alternative we are examining, which would shift the warning paradigm from outdoor sirens to automated outbound telephone warnings, would cost approximately $400,000.00 annually in service contracts. Another alternative, changing the technology in the radio system to allow for individual or group activation of the outdoor sirens is anticipated to cost $750,000.00 for a portion of our existing system.

**Role of Government in warning**

Alert and warning is, first and foremost, a role of local governments. If there is any change to the warning system, we need to make sure that the change will not add more time to the process. In addition, any system at the federal level needs to be designed to clearly indicate it supports the local governments in their alert and warning role. Any

proposed federal system will also have to have provision for local governments to access it as, for example, the current NAWAS system does.

I would also be remiss if I failed to mention the close working relationship between local emergency managers and the National Weather Service Weather Forecast Officers.

**A Severe Weather Portrait**

Picture in your mind a sunny spring morning in Kansas. The day starts beautifully with a breathtaking sunrise. Not too long after that, we begin to notice that things are getting a bit "muggy." We are small observers to a large aerial battle taking place between a mass of warm, humid air moving northward from the Gulf of Mexico on the low level jet stream and a mass of cool, dry Canadian air being funneled eastward down the slopes of the Rocky Mountains. They will clash along a front, most likely located over the State of Kansas. The skirmishes between these air masses won't consist of Improvised Explosive Devices (IEDs) – instead, they will consist of rapidly growing and exploding cumulus clouds that will eventually produce severe thunderstorms on the high plains.

Emergency Managers in the areas that might be potentially affected will be in communication with their local Weather Forecast Office of the National Weather Service. In my own case, I would be on the telephone or exchanging e-mail with Meteorologist-In-Charge Richard Elder at the WFO Wichita. Through the Internet and other sources, we would follow the discussion between local meteorologists and the Storm Prediction Center in Norman, Oklahoma to find out whether a weather watch will be warranted.

Watches for this type of severe weather – whether thunderstorms or tornadoes – are typically issued for a six hour period of time. Once the watch is issued, emergency managers begin to make contact with traditional first responders (law enforcement, fire, emergency medical services, public works, hospital community, etc.) to make sure they are aware of the potential for severe weather. Then, the sometimes long job of watching for developments on satellite photos and radar systems begins. When there is a hint that thunderstorms are beginning to develop and that they may move into Sedgwick County, we activate our volunteer severe weather spotter system to become ready to deploy. In our case, this volunteer system consists not only of specially trained citizen volunteers who are also licensed amateur radio operators, but it also consists of members of law enforcement and fire departments within the 20 cities located inside Sedgwick County. Our goal is to have any severe weather met at the jurisdictional border by our spotters, and observed constantly as it moves through and eventually out of Sedgwick County. All of our spotters are linked with our Emergency Management program through our 800 MHz Public Safety trunked radio system. This allows key partners like the National Weather Service, law enforcement, fire, emergency medical service, the hospital community (through the Emergency Department) and the media to be immediately apprised of what is happening with severe weather. Another means of accessing this information is provided to the media and general public through our web site (http://www.sedgwickcounty.org/emermgmt/PublicLogList.cfm).

Once the National Weather Service has the indication of a tornado beginning to form in the upper areas of the storm from their Doppler radar system, they will communicate with us and our spotters over the trunked radio system. Or, alternatively, if one of our spotters in the field observes a tornado beginning to form, this information is instantaneously transmitted both to us and the National Weather Service. A short discussion will then ensue as to whether the NWS believes they will issue a warning based on this observation. Ideally, the decision for the NWS and us to warn will be reached at the same time, and the systems will be activated simultaneously – to reinforce the importance of the warning with the public.

Newspaper reports from the series of tornado events happening in Oklahoma, Missouri, and Georgia over the Mother's Day weekend indicate that in some areas, the NWS and local authorities were able to give as much as 13 minutes of advance warning. This margin of time greatly contributed to the fact that there wasn't an even greater loss of life. This time frame also illustrates the importance and criticality of not adding additional time for local governments to activate alert and warning functions. Those minutes may literally be the difference between life and death for some.

**Recommendations**

I would recommend for the committee to please consider the fact that alert and warning is first and foremost a duty of local governments. Help in accomplishing this function is always welcome from our federal partners, but the relationship of the federal government supporting the primacy of the state and local government duty to warn should exist through the effort or system.

I would also like to urge that Congress fully support the vital work of the National Weather Service and recognize that the local Weather Forecast Offices (WFOs) are a vitally important link in making sure the public has adequate alert and warning regarding sever weather events. While the National Weather Service is an important federal partner in this relationship, they are by no means the only federal partner involved. FEMA also has a pivotal role to play in this process since they are the only Federal Agency that has a mission encompassing "all hazards." I know that as a local government emergency manager I would have a great deal of discomfort if a federal warning system were implemented without FEMA playing a key role in that system.

**Conclusion**

I would request that the committee remember the following elements from our discussion today:

- That alert and warning is, first and foremost, a duty of local governments.
- That a mere minute can mean the difference between life and death in many alert and warning situations.
- That any federal warning system must have FEMA in a key role as they are the only federal partner with a mission covering all hazards.

- That improvement to warning systems consist not only of equipment and technology, but training and outreach so people understand how to respond in an appropriate manner to the alert or warning.

I stand ready to address any questions the subcommittee members may have.

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The International Association of Emergency Managers has over 4,200 members including emergency management professionals at the state and local government levels, tribal nations, the military, colleges and universities, private business and the nonprofit sector in the United States and in other countries. Most of our members are U.S. city and county emergency managers who perform the crucial function of coordinating and integrating the efforts at the local level to prepare for, mitigate the effects of, respond to, and recover from all types of disasters including terrorist attacks. Our membership includes emergency managers from large urban areas as well as rural areas.

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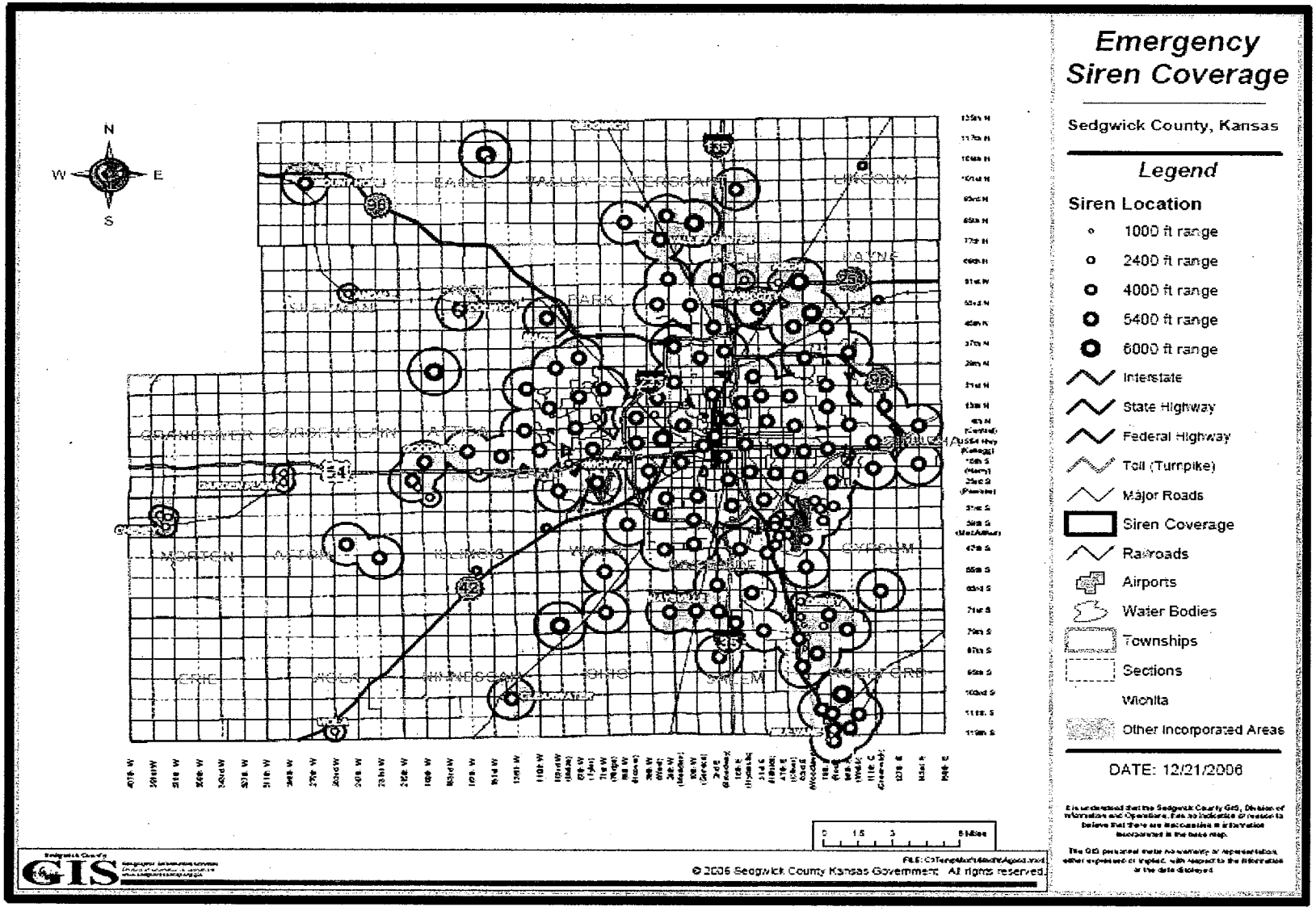
Exhibit A


Emergency Siren Coverage
Sedgwick County, Kansas
Legend
Siren Location
1000 ft range
2400 ft range
4000 ft range
5400 ft range
6000 ft range
Interstate
State Highway
Federal Highway
Toll (Turnpike)
Major Roads
Siren Coverage
Railroads
Airports
Water Bodies
Townships
Sections
Wichita
Other Incorporated Areas
DATE: 12/21/2006
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